



**Code: 6055**

Family: Technical Engineering  
Service: Operation and Construction  
Group: Engineering, Designing, and Structural  
Series: Mechanical Engineering

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## **CLASS TITLE: MECHANICAL ENGINEER V**

### **CHARACTERISTICS OF THE CLASS**

Under supervision, the class supervises the work of subordinate engineers engaged in assessing the operational efficiency of mechanical systems and equipment OR serves as project engineer for a variety of projects responsible for coordinating and overseeing the design, installation, maintenance and inspection of mechanical equipment and systems, and performs related duties as required

### **ESSENTIAL DUTIES**

- Assigns, supervises and reviews the work of lower level engineers engaged in calibrating equipment and conducting tests to assess the operational efficiency of mechanical systems and equipment
- Prepares and supervises the preparation of contract specifications and cost estimates for mechanical equipment installations, replacement or repair projects
- Supervises staff functioning as resident engineers by monitoring contractor installation methods, inspecting equipment and ensuring work is completed according to contract specifications
- Coordinates and performs training for subordinate engineers in equipment operations and testing procedures and provides technical support to departmental staff
- Manages large design and construction projects and reviews technical drawings, proposed changes and contract amendments prepared by architects, engineers and contractors to ensure compliance with municipal codes, design standards and project specifications, and recommends changes
- Participates in the preparation of grant applications for various energy efficient features and programs
- Monitors work in progress and confers with contractors to review and approve engineering changes, contract modifications and related costs
- Analyzes and provides technical assistance in resolving engineering design and installation problems
- Reviews and approves invoices from vendors and pay applications to contractors ensuring payment requests reflect completed work
- Prepares comprehensive project status and cost reports for management
- Confers with operating departments and sister agencies to coordinate mechanical engineering projects and activities
- Researches new methods and techniques for use in installing, maintaining and repairing mechanical systems and equipment, as required

**NOTE:** *The list of essential duties is not intended to be inclusive; there may be other duties that are essential to particular positions within the class.*

### **MINIMUM QUALIFICATIONS**

#### **Education, Training, and Experience**

Graduation from an accredited college or university with a Bachelor's degree in Mechanical Engineering or a directly related field of engineering, plus three years of mechanical engineering

work experience of which one year is in a supervisory role related to the responsibilities of the position or an equivalent combination education, training and experience, provided that the minimum degree requirement is met

**Licensure, Certification, or Other Qualifications**

- Registration as a Professional Engineer (R.P.E.) in the State of Illinois is required

**WORKING CONDITIONS**

- General office environment and water pumping stations
- May be exposed to inclement weather and extreme temperatures

**EQUIPMENT**

- Standard office equipment (e.g., telephone, printer, photocopier, fax machine, calculator)
- Computers and peripheral equipment (e.g., personal computer, computer terminals, hand-held computer)
- Mechanical calibration and testing equipment, AutoCAD system

**PHYSICAL REQUIREMENTS**

- Ability to access mechanical systems and equipment during various stages of installation or repair

**KNOWLEDGE, SKILLS, ABILITIES, AND OTHER WORK REQUIREMENTS**

**Knowledge**

Advanced knowledge of:

- \*applicable mechanical engineering theories, principles, methods, and procedures
- \*mechanical system installation and maintenance methods
- \*procedures and methods for monitoring and maintaining related equipment and instruments

Considerable knowledge of:

- \* use of mechanical and hydraulic equipment
- \*applicable computer software packages and applications
- \*project management principles, methods, practices and procedures

Moderate knowledge of:

- applicable training practices and procedures

Some knowledge of:

- supervisory methods, practices and procedures

Knowledge of applicable City and department policies, procedures, rules, regulations, and ordinances

Other knowledge as required for successful performance in the Mechanical Engineer IV class

**Skills**

- ACTIVE LEARNING – Understand the implications of new information for both current and future problem-solving and decision-making

- \*ACTIVE LISTENING - Give full attention to what other people are saying, taking time to understand the points being made, ask questions as appropriate, and not interrupt at inappropriate times
- \*MONITORING – Monitor and assess performance of one’s self, other individuals or organizations to make improvements or take corrective action
- \*COMPLEX PROBLEM SOLVING – Identify complex problems and review related information to develop and evaluate options and implement solutions
- \*SYSTEMS ANALYSIS - Determine how a system should work and how changes in conditions, operations, and the environment will affect outcomes

Other skills as required for successful performance in the Mechanical Engineer IV class

### **Abilities**

- COMPREHEND ORAL INFORMATION - Listen to and understand information and ideas presented through spoken words and sentences
- SPEAK - Communicate information and ideas in speaking so others will understand
- COMPREHEND WRITTEN INFORMATION - Read and understand information and ideas presented in writing
- WRITE - Communicate information and ideas in writing so others will understand
- REASON TO SOLVE PROBLEMS – Apply general rules to specific problems to produce answers that make sense
- REACH CONCLUSIONS - Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events)

Other abilities as required for successful performance in the Mechanical Engineer IV class

### **Other Work Requirements**

- LEADERSHIP - Demonstrate willingness to lead, take charge and offer opinions and direction
- DEPENDABILITY – Demonstrate reliability, responsibility and dependability and fulfill obligations
- ATTENTION TO DETAIL – Pay careful attention to detail and thoroughness in completing work tasks
- ANALYTICAL THINKING – Analyze information and using logic to address work or job issues and problems

Other work requirements as required for successful performance in the Mechanical Engineer IV class

All employees of the City of Chicago must demonstrate commitment to and compliance with applicable state and federal laws, and City ordinances and rules; the City’s Ethics standards; and other City policies and procedures.

The City of Chicago will consider equivalent foreign degrees, accreditations, and credentials in evaluating qualifications.

\* May be required at entry.